

What is claimed is:

1 1. A dual-mode twin-chamber thrust bearing having hydraulic
2 damping, comprising:
3 a work chamber;
4 an equalizing chamber;
5 a partition that separates the work chamber from the
6 equalizing chamber, the partition having a passageway formed in
7 the center, the passageway being closable by an actuator, the
8 partition having a recess, the partition having partition holes;
9 a damping channel that hydraulically connects the work
10 chamber and the equalizing chamber;

11 a membrane located in the recess in the partition, the
12 membrane sized so that it covers the holes in the partition and
13 located so that it can be sealingly positioned; and

14 a pressure disk which has pressure disk holes, the pressure
15 disk holes being located in the area of the partition holes, the
16 pressure disk being movable from an open position to a closed
17 position,

18 wherein in the closed position, the pressure disk releases
19 the membrane so that the membrane may move, and in the open
20 position, the pressure disk secures the membrane so that the
21 membrane may not move.

1 2. The thrust bearing according to Claim 1, wherein
2 the partition has a top part and a corresponding bottom part, the
3 parts being connected at their outer edges so that they form a
4 gap between the top part and the bottom part, and further wherein
5 the pressure disk is arranged in the gap.

1 3. The thrust bearing according to Claim 1, wherein the
2 pressure disk has a hub-like connecting piece formed in the
3 middle, the hub-like connecting piece being arranged in the
4 passageway, the hub-like connecting piece having a free edge

5 directed toward the equalizing chamber.

1 4. The thrust bearing according to claim 3, wherein the free
2 edge forms a stop surface for sealing the passageway.

1 5. The thrust bearing according to claim 4, wherein a mating
2 surface of the seal is formed by an annular surface of the
3 movable outer wall of the equalizing chamber.

1 6. The thrust bearing according to claim 3, wherein the
2 actuator is provided with a catch which protrudes into the
3 connecting piece of the pressure disk, and further wherein when
4 the passageway has been opened by the actuator, the catch rests
5 on the pressure disk to secure the membrane.

1 7. The thrust bearing according to claim 6 wherein the catch
2 has a tulip shape with lateral passageways in the bottom area,
3 and wherein when the passageway has been opened by the actuator,
4 the top edge rests on the pressure disk.

1 8. The thrust bearing according to claim 6, wherein the catch
2 has a mushroom shape with a star-shaped cap, the star-shaped cap
3 forming star points which rest on the pressure disk to secure the
4 membrane in the closed position.

1 9. The thrust bearing according to claim 2 wherein the bottom
2 part of the partition has an annular groove, the membrane being
3 arranged in the annular groove.

1 10. The thrust bearing according to claim 1 wherein the pressure
2 disk is formed from sheet metal and has a coating made of a
3 polymeric material.

1 11. The thrust bearing according to claim 1 wherein the pressure

